

**WHAT IS CLAIMED IS:**

1. A method for processing data received through a wireless channel, in a communication device that supports bluetooth wireless communication, comprising the steps of:

(a) a bluetooth module receiving data through a wireless channel;

5 (b) the bluetooth module informing a bluetooth host that data received through a universal serial bus (USB) exists in the bluetooth module; and

(c) the bluetooth host reading the data received by the bluetooth module in the step (a) through the USB when the bluetooth host is informed that received data exists in the step (b).

2. The method of claim 1, wherein, in the step (b), the bluetooth module informs the bluetooth host that the received data exists in the bluetooth module when the bluetooth module receives from the bluetooth host a request for checking whether the received data exists in the bluetooth module, in

5 response to the request for checking whether the received data exists.

3. The method of claim 2, wherein, in the step (b), the request for checking whether the received data exists is performed using a request for interrupt, which is periodically transferred by the bluetooth host to the bluetooth module through the USB, and the informing is performed using an

5 event packet.

4. The method of claim 3, wherein the step (c) comprises the steps of:

(c1) the bluetooth host making a request to the bluetooth module through the USB that the data received in the step (a) be sent from the 5 bluetooth module to the bluetooth host when the bluetooth host is informed that received data exists in the step (b) through the event packet; and

(c2) the bluetooth module providing the data received in the step (a) to the bluetooth host through the USB when the bluetooth module receives the request for the received data in the step (c1).

5. The method of claim 4, wherein the event packet comprises a link type field as a parameter field, for indicating an asynchronous link or a synchronous link,

and wherein, in the step (c1), a request for synchronous or 5 asynchronous data is performed according to the value of the link type field in the event packet.

6. The method of claim 4, wherein the event packet comprises a data length field as a parameter field, for indicating the length of the data received in the step (a),

and wherein, in the step (c), the request for the received data in the step 5 (c1) and the provision of the received data in the step (c2) are repeated an

appropriate number of times, with reference to the value of the data length field in the event packet.

7. A method for processing data received through a wireless channel in a bluetooth module of a communication device that supports bluetooth wireless communication, comprising the steps of:

- (a) receiving from a bluetooth host through a universal serial bus (USB) a request for checking whether received data exists in a bluetooth module;
- 5 (b) the bluetooth module informing the bluetooth host through the USB that received data exists when data received from the outside through a wireless channel exists in the bluetooth module;
- 10 (c) receiving from the bluetooth host, which is informed in the step (b) that the received data exists, through the USB, a request for the received data; and
- 15 (d) the bluetooth module, after receiving the request for received data, providing the data received from the outside through the wireless channel to the bluetooth host through the USB.

8. The method of claim 7, wherein the request for checking whether received data exists, which is received in the step (a), is performed using a request for interrupt which is periodically transferred by the bluetooth host to the bluetooth module through the USB,

5 and wherein the informing in the step (b) is performed using an event  
packet.

9. The method of claim 8, wherein the event packet comprises a  
link type field as a parameter field for indicating an asynchronous link or a  
synchronous link,

and wherein a request for synchronous or asynchronous data according  
5 to the value of the link type field in the event packet is received from the  
bluetooth host in the step (c).

10. The method of claim 8, wherein the event packet comprises a  
data length field as a parameter field for indicating the length of the received  
data,

wherein data of a limited length is provided to the bluetooth host in the  
5 step (d),

and wherein the steps (c) and (d) are repeated an appropriate number of  
times according to the value of the data length field in the event packet.

11. A computer readable recording medium for recording a  
program which is executed in a computer for processing received data, in a  
bluetooth module of a communication device that supports bluetooth wireless  
communication, wherein the program comprises the steps of:

5 (a) receiving a request from a bluetooth host through a universal serial  
bus (USB), for checking whether received data exists in a bluetooth module;

(b) informing the bluetooth host through the USB that received data exists when data received from the outside through a wireless channel exists in the bluetooth module;

10 (c) receiving from the bluetooth host, which is informed that the received data exists in the step (b) through the USB a request for the received data; and

(d) transferring the data received from the outside through the wireless channel to the bluetooth host through the USB.

12. A method for processing data received through a wireless channel, in a bluetooth host of a communication device that supports bluetooth wireless communication, comprising the steps of:

5 (a) a bluetooth host transferring a request to a bluetooth module through a universal serial bus (USB), for checking whether data received from the outside through a wireless channel exists;

(b) being informed by the bluetooth module through the USB that data received through the wireless channel exists when data received from the outside through the wireless channel exists in the bluetooth module;

10 (c) making a request to the bluetooth module through the USB that the received data be sent from the bluetooth module to the bluetooth host, when the bluetooth host is informed that received data exists in the step (b); and

(d) receiving from the bluetooth module through the USB, the data received by the bluetooth module from the outside through the wireless channel.

13. The method of claim 12, wherein the request for checking whether the received data exists, which is transferred in the step (a), is performed using a request for interrupt which is periodically transferred by the bluetooth host to the bluetooth module through the USB,

5 and wherein the informing in the step (b) is performed by an event packet.

14. The method of claim 13, wherein the event packet comprises a link type field as a parameter field for indicating an asynchronous link or a synchronous link,

5 wherein a request for synchronous or asynchronous data to the bluetooth module is performed according to the value of the link type field in the event packet in the step (c).

15. The method of claim 13, wherein the event packet comprises a data length field as a parameter field, for indicating the length of the data received from the outside through the wireless channel,

wherein data of a limited length is received in the step (d),

5 and wherein the steps (c) and (d) are repeated an appropriate number of times according to the value of the data length field in the event packet.

16. A computer readable recording medium for recording a program which is executed in a computer for processing received data, in a bluetooth host of a communication device that supports a bluetooth wireless communication, wherein the program comprises the steps of:

- 5       (a) transferring a request to a bluetooth module through a universal serial bus (USB), for checking whether data received from the outside through a wireless channel exists in a bluetooth module;
- (b) being informed from the bluetooth module through the USB that data received through the wireless channel exists when data received from the
- 10      outside through the wireless channel exists in the bluetooth module;
- (c) making a request to the bluetooth module through the USB that the received data be sent from the bluetooth module to the bluetooth host, when the bluetooth host is informed that the received data exists in the step (b); and
- 15      (d) receiving from the bluetooth module through the USB, the data received by the bluetooth module from the outside through the wireless channel.

17. A communication apparatus for supporting bluetooth wireless communication, comprising:

- a bluetooth module for transferring and receiving data through a wireless channel;

5            a bluetooth host for transferring data received from an application to  
the bluetooth module, reading data received in the bluetooth module, and  
transferring the received data to the application; and

              a universal serial bus (USB) for connecting the bluetooth module and  
the bluetooth host,

10          wherein the bluetooth module informs the bluetooth host through the  
USB that received data exist, when data received through the wireless channel  
exists in the bluetooth module,

              and wherein the bluetooth host reads through the USB the data  
received in the bluetooth module when the bluetooth host is informed by the  
15        bluetooth module that the received data exists.

18.        The apparatus of claim 17, wherein the bluetooth module  
informs that received data exists in the bluetooth module using an event packet  
in response to a request for interrupt which is periodically transferred by the  
bluetooth host to the bluetooth module through the USB, when the data  
5        received through the wireless channel exists in the bluetooth module.

19.        The apparatus of claim 18, wherein the event packet comprises  
a link type field as a parameter field for indicating an asynchronous link or a  
synchronous link and a data length field as a parameter field for indicating the  
length of the data received from the outside through the wireless channel.